

ABSTRACT

Flexible proton electrolyte membranes, fuel cells, and methods for making membranes are disclosed. One exemplary membrane, among others, includes a flexible proton electrolyte membrane having the characteristic of a proton conductivity of about 1×10^{-6} to 1×10^{-1} S/cm at a temperature range of about 30°C to about 180°C and a relative humidity of about 0% to 100%.